

REMARKS**Overview**

Claims 8, 10-13 and 15-17 are pending in this application. Claim 8 has been amended to correct a formality. Claim 9 has been cancelled. The present response is an earnest effort to traverse all rejections as the present claims define patentable subject matter.

Issues Under 35 U.S.C. § 103

Claims 8-10 and 16 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U. S. Patent No. 3,574,930 to Riddel et al in view of U. S. Patent No. 6,099,164 to Rosen et al, and further in view of U. S. Patent No. 4,423,403 to Miyake et al and U. S. Patent No. 6,309,695 to Singh. The present response is an earnest effort to traverse all rejections.

In stringing together reference after reference in order to pick and choose limitations of the claim, the Examiner is impermissibly combining references while simultaneously ignoring the invention as a whole. As the Federal Circuit has made clear, "focusing on the obviousness of substitutions and differences instead of on the invention as a whole is a legally improper way to simplify the difficult determination of obviousness." Hybritech v. Monoclonal Antibodies, Inc., 802 F.2d 1367, 231 U.S.P.Q. 81, 93 (Fed. Cir. 1986).

One of the problems in the Examiner's combination of references is that none of these prior art references recognize the problems solved by the Applicant's invention. In particular, none of these references recognize the problem of producing standard sized thin film thermistors. None of the references relied upon by the Examiner provide any teaching or even suggestion that thin film thermistors having different negative temperature coefficient of resistance versus temperature curves can be produced in a standardized physical size. The fact that the present invention is directed to this problem is clear in the claims themselves. For example, claim 8

explicitly requires "selecting a mixture of metal oxides to provide the negative temperature coefficient of resistance versus temperature curve while maintaining a standardized physical size for the thermistor."

The Examiner simply ignores the problem that the present invention addresses. Therefore, the Examiner's analysis is inconsistent with controlling authority. For example, the Federal Circuit has stated that "the problem solved by the invention is always relevant." In re Wright, 838 F.2d 1216, 6 U.S.P.Q.2d 1959, 1961 (Fed. Cir. 1988). Neither the Examiner nor the prior art references relied upon address the relevant problem.

The original specification specifically speaks to this issue regarding physical size. For example, the problem that "the resistance value is dependent in part upon the physical size of the resulting thermistor" is stated on page 2, lines 6-8. The summary of the invention specifically states "The NTC thermistor of the present invention results in the ability to have standardized sizes of resistors in that the resistance value need not be dependent upon the physical size of the thermistor" (page 3, lines 16-19). The advantage of being able to achieve different relationships between resistance and temperature in resistors of the same size is also discussed on page 7, last paragraph spanning to page 8, line 18 of the specification.

It is clear that the Examiner ignores the problem and the specific limitations of claim 8 in that the Examiner can only point to Riddel as disclosing that a thermistor assembly has a physical size (Office Action, page 2, numbered paragraph 3). Riddel, however, does not provide for "selecting a mixture of metal oxides to provide the negative temperature coefficient of resistance versus temperature curve while maintaining a standardized physical size for the thermistor." Riddel simply does not relate the mixture of metal oxides to the standardized physical size of the

thermistor. By parsing this limitation too much, the Examiner eviscerates that which makes the invention patentable and the prior art remote.

As claim 10 depends from claim 8, it is respectfully submitted that this rejection should also be withdrawn as none of the references relied upon by the Examiner are directed towards solving the same problem addressed by the Applicant's invention of claim 8 and the Examiner has not provided proper motivation or suggestion to combine these references.

With respect to claim 16, the Examiner is improperly combining Riddel with other references. Riddel is directed toward thermistor assemblies (Abstract). The Examiner recognizes that Riddel fails to disclose selecting a mixture of metal oxides to provide desired negative temperature coefficient of resistance properties and sputter depositing of metal oxides on an alumina substrate (Office Action, page 3, first paragraph). The Examiner attempts to remedy the requirement of an "alumina" substrate by relying upon Singh. The difficulty in such a combination is that it is critical to Riddel that a nickel substrate be used so that an insulative layer of nickel oxide can be formed (col. 1, lines 61-70). Without the nickel substrate and nickel oxide layer of Riddel, the resulting thermistor would no longer meet the intended purpose of Riddel. For example, the resulting thermistor would not have the "high heat dissipation characteristics" (col. 1, lines 66-70) without the nickel substrate. Therefore, for all these reasons, this rejection to claim 16 should also be withdrawn.

Claims 11-13 and 15 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,574,930 to Riddel et al, U.S. Patent No. 6,099,164 to Rosen et al, U.S. Patent No. 4,423,403 to Miyake et al, in view of U.S. Patent No. 6,314,637 to Kimura et al and further in view of Bunshah et al (Deposition Technologies for Films and Coatings), and U.S. Patent No. 4,498,071 to Plough, Jr., et al. As claims 11-13 and 15 depend from claim 8, it is

respectfully submitted that these rejections should be withdrawn for the reasons previously stated as none of these references recognizes the problems resolved by the present invention.

Claim 17 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 3,574,930 to Riddel et al in view of Bunshah et al (Deposition Technologies for Films and Coatings). It is specifically noted that the Examiner has failed to make a *prima facie* case of obviousness for claim 17 as the Examiner has failed to address all limitations of claim 17. In particular, claim 17 requires "the mixture of metal oxides selected to provide for desired negative temperature coefficient of resistance properties while maintaining a standard package size." Neither Riddel nor Bunshah are directed towards solving the problem recognized and addressed by the present invention. Therefore, it is respectfully submitted that this rejection to claim 17 should also be withdrawn.

Conclusion

No fees or extensions of time are believed to be due in connection with this amendment; however, consider this a request for any extension inadvertently omitted and charge any additional fees to Deposit Account No. 26-0084.

Reconsideration and allowance is respectfully requested.

Respectfully submitted,

John D. Goodhue

JOHN D. GOODHUE, Reg. No. 47,603
McKEE, VOORHEES & SEASE, P.L.C.
801 Grand Avenue, Suite 3200
Des Moines, Iowa 50309-2721
Phone No: (515) 288-3667
Fax No: (515) 288-1338
CUSTOMER NO: 22885
Attorneys of Record

- bja -